

PROGRESSIVE INSTRUCTION FOLDING IN A PROCESSOR WITH FAST  
INSTRUCTION DECODE

ABSTRACT OF THE DISCLOSURE

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A plurality of fold decoders are each coupled to a different set of successive entries within an instruction fetch buffer stack and check the contents of the successive entries for a variable number of variable-length instructions which may be folded. Folding information for each of the respective set of entries, identifying a number of instructions therein which may be folded (if any) and a size of each instruction which may be folded, is produced by the fold decoders and stored in the first entry of the set, then transmitted to the main decoder for use in folding instructions during decoding.